pound remained principally suspended at the end of twenty four hours, and when used in writing had the appearance of common ink, but in a few days changed to a dull brown colour. A portion of the fresh infusion was distilled, but the liquid which came over was not altered in colour by the sulphate of iron.

The above experiments indicate the presence of tannin and gallic acid, the former in large quantities, in the root of the Geranium. The proportion of tannin seems considerably to exceed that in the kino of the shops. The gallic acid is indicated by the dark precipitate remaining in solution. This is Berthollet's criterion. It differs however from the acid of oak galls in not reddening vegetable blues, and not passing over in distillation.

Alcohol and proof spirit readily dissolve the active constituents of the Geranium. The tincture has a great sensible astringency, and is a convenient mode of keeping the article for use.

The Geranium has been repeatedly employed in medicine by various practitioners in this country. I have found it useful in a number of cases, where astringents were capable of rendering service. It is particularly suited to the treatment of such discharges as continue from debility after the removal of their exciting causes. The tincture forms an excellent local application in sore throats and ulcerations of the mouth.

Its internal use has been recommended in dysentery and cholera infantum, but astringents are not always admissible in these complaints, at least in their early stages, during the existence of much active inflammation, or during the presence of any substance requiring to be removed.

The Geranium may be used in powder in extract, or in tincture. Its doses are similar to those of kino and catechu, a drachm or two of the tincture, twenty or thirty grains of the powder, and a quantity somewhat less of the extract.

BOTANICAL REFERENCES.

Geranium maculatum, *Sp. pl.* Willdenow, iii. 705.—Gronovius, *Virg.* 101.—Walter, *Carol.* 175.—Michaux, ii. 38.—Pursh, ii. 448.—G. caule erecto, herbaceo, foliis oppositis, quinque partitis, incisis &c. Cavanilles, *diss. t.* 86, *f.* 2.—G. batrachioides, Americanum, maculatum, floribus obsolete cœruleis. Dill. *Elth.* 158. *t.* 131, *f.* 159.

MEDICAL REFERENCES.

Schœpf, 107.—Bart. *Coll.* 7.—Cutler, *Mem. Amer. Acad.* i. 469.—Thacher, *Disp.* 224.

PLATE VIII.

Fig. 1. *Geranium maculatum.*
Fig. 2. *The fruit.*
Fig. 3. *The root.*

JACOB BIGELOW *American Medical Botany* BOSTON, 1817-1820 CARY GRAPHIC ARTS COLLECTION, ROCHESTER INSTITUTE OF TECHNOLOGY Octavo